FACULTY OF TECHNOLOGY AND ENGINEERING

DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY AND RESEARCH

DEPARTMENT OF COMPUTER ENGINEERING

A.Y. 2023-24 [EVEN]

LAB MANUAL

CE259: PROGRAMMING IN PYTHON

Semester:IV **Academic Year:2023-2024**

Subject Code:CE259 **Subject Name:PROGRAMMING IN PYTHON**

Student Id:22DCE006 **Student Name:PROBIN BHAGCHANDANI**

PRACTICAL INDEX

Sr. No.	AIM	Assigned Date	Completion Date	Grade	Assessment Date	Signature
1	A) Introduction to Python Programming. Installation & Configuration of Python. Along with its all-major editors, IDLE, Pycharm, Anaconda, Jupyter, Interpreter etc. B) Write a python program to calculate simple interest.	21/12/2023	21/12/2023			

PRACTICAL-1

AIM: A) Introduction to Python Programming. Installation & Configuration of Python. Along with its all-major editors, IDLE, Pycharm, Anaconda, Jupyter, Interpreter etc.
B) Write a python program to calculate simple interest.

IDLE

IDLE (short for Integrated Development and Learning Environment) is an integrated development environment for Python, which has been bundled with the default implementation of the language since 1.5.2b1. It is packaged as an optional part of the Python packaging with many Linux distributions. It is completely written in Python and its GUI toolkit. IDLE is intended to be a simple IDE and suitable for beginners, especially in an educational environment. To that end, it is cross-platform, and avoids feature clutter. According to the included README, its main features are:

• Multi-window text editor with syntax highlighting, autocompletion, smart indent and
other.
• Python shell with syntax highlighting.
• Integrated debugger with stepping, persistent breakpoints, and call stack visibility

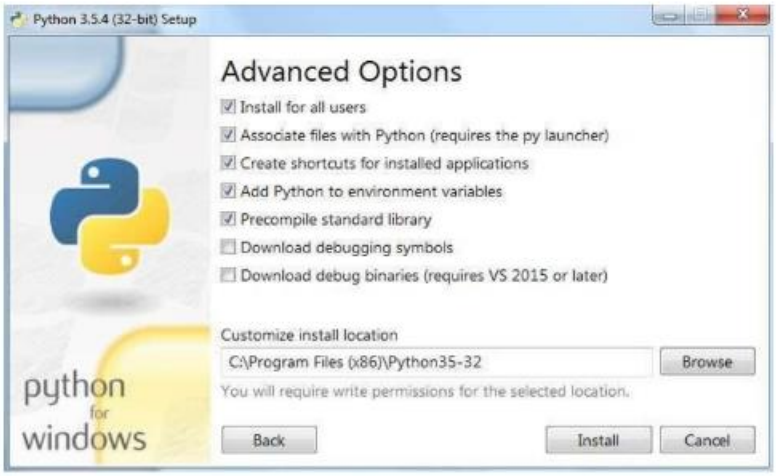
PyCharm

PyCharm is an integrated development environment (IDE) used for programming in Python. It provides code analysis, a graphical debugger, an integrated unit tester, integration with version control systems, and supports web development with Django. PyCharm is developed by the Czech company JetBrains.

It is cross-platform, working on Microsoft Windows, macOS and Linux. PyCharm has a Professional Edition, released under a proprietary license and a Community Edition released under the Apache License. PyCharm Community Edition is less extensive than the Professional Edition.

Anaconda

Anaconda is a distribution of the Python and R programming languages for scientific computing (data science, machine learning applications, large-scale data processing, predictive analytics,etc.), that aims to simplify package management and deployment. The distribution includes data-
science packages suitable for Windows, Linux, and macOS.



B)

PROGRAM CODE:

```
print("22DCE006")
p=input("Enter P: ")
r=input("Enter R: ")
t=input("Enter T: ")
print(int(int(p)*int(r)*int(t))/100, " is the simple interest")
```

OUTPUT:

```
22DCE006
Enter P: 1000
Enter R: 5
Enter T: 2
100.0  is the simple interest
PS C:\Users\Administrator\Desktop\python>
```

CONCLUSION: From this practical, I learned about the python fundamentals, installation and configuration of its environment.

Staff Signature:
Grade:
Remarks by the Staff:

PRACTICAL-2

AIM: A) Create a list and apply methods (append, extend, remove, reverse), arrange created list in ascending and descending order.
B) List1 = [1, 2, 3, 4, ["python", "java", "c++", [10,20,30]], 5, 6, 7, ["apple", "banana","orange"]] . From above list get word “orange” and “Python” & repeat this list five times without using loops.
C) Create a list and copy it using slice function
D) Create a tuple and apply different type of mathematical operation on it (Sum, Maximum, minimum etc.).

A)

PROGRAM CODE:

```
print("22DCE006")
list=[10,20,40,80]
print(list)
print("Append Function")
list.append(77)
print(list)
list2=[11,22,33]
print("Extend Function")
list.extend(list2)
print(list)
print("Remove Function")
list.remove(77)
print(list)
print("Reverse Function")
list.reverse()
print(list)
print("Ascending Sorting")
list.sort()
print(list)
print("Descending Sorting")
list.sort(reverse=True)
print(list)
```

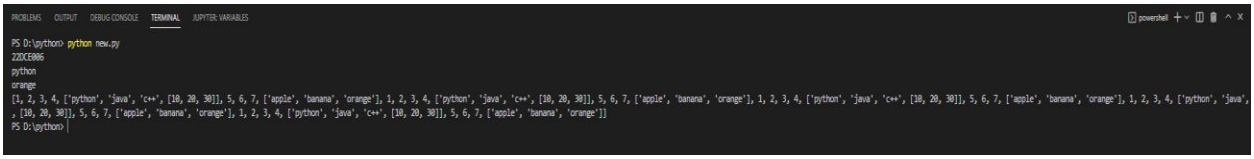
OUTPUT:

```
PS D:\python> python trial.py
22DCE006
[10, 20, 40, 80]
Append Function
[10, 20, 40, 80, 77]
Extend Function
[10, 20, 40, 80, 77, 11, 22, 33]
Remove Function
[10, 20, 40, 80, 11, 22, 33]
Reverse Function
[33, 22, 11, 80, 40, 20, 10]
Ascending Sorting
[10, 11, 20, 22, 33, 40, 80]
Descending Sorting
[80, 40, 33, 22, 20, 11, 10]
PS D:\python>
```

B)
PROGRAM CODE:

```
print("22DCE006")
List1 = [1, 2, 3, 4, ["python", "java", "c++", [10,20,30] ], 5, 6, 7, [ "apple" , "banana" , "orange" ] ]
print(List1[4][0])
print(List1[8][2])
repeatedlist=List1*5
print(repeatedlist)
```

OUTPUT:



C)

PROGRAM CODE:

```
print("22DCE006")
list=[1,2,3,4,5,6,7]
x=slice(0,7)
list2=list[x]
print(list2)
```

OUTPUT:

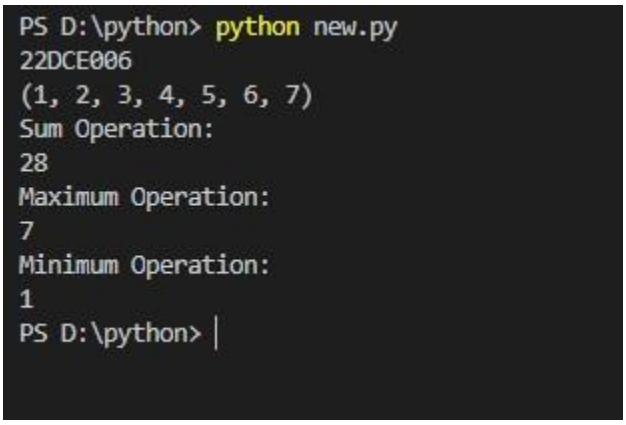
```
PS D:\python> python new.py
22DCE006
[1, 2, 3, 4, 5, 6, 7]
PS D:\python>
```

D)

PROGRAM CODE:

```
print("22DCE006")
a=(1,2,3,4,5,6,7)
print(a)
print("Sum Operation:")
print(sum(a))
print("Maximum Operation:")
print(max(a))
print("Minimum Operation:")
print(min(a))
```

OUTPUT:



CONCLUSION: In this practical I learned various method like append, extend, remove, reverse, sort in python and how to use slice method and maximum and minimum method in python.

Staff Signature:
Grade:
Remarks by the Staff: